

NOTE ON THE SPECIES OF *CYCLOPHORUS* FOUND AT HONG-KONG.

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DURING a period of service extending over three years recently spent at Hong-Kong, I collected several hundreds of a species of *Cyclophorus*, which, as far as I can ascertain, is the only one of the genus to be found there.

Mr. J. H. Ponsonby has also been unable to find more than one species in the island. The following are the most important references to the occurrence of *Cyclophorus* at Hong-Kong :—

Kobelt (Tierreich, Cyclophoridae, pp. 138, 142) states that *C. punctatus*, Grat., and *C. exaltatus*, Pfr., are found at Hong-Kong.

Möllendorff (Jahrb. deutsch. Malak. Ges., 1882, p. 266, pl. ix, fig. 3) quotes *C. exaltatus*, Pfr., from Hong-Kong (from Happy Valley, Sheko, and Little Hong-Kong).

Dr. E. von Martens (Preuss. Exped. Ost. Asien, p. 39, pl. xix, fig. 8) gives *C. exaltatus*, Pfr., from Hong-Kong, and mentions that it was taken there by Mr. Fortune and also by himself.

*C. exaltatus*, Pfr., was described from a shell in the Mus. Cuming, locality unknown, and Reeve (Conch. Icon., *Cyclophorus*, species 24) considers it to be "a small *C. volvulus*." *C. punctatus*, Grat., does not occur at Hong-Kong, but is common at Canton, and I have also taken it at Hoi Ha, on the mainland, about 40 miles to the east of Hong-Kong. No doubt, if the country is ever properly worked, it will be found elsewhere. *C. exaltatus*, Pfr., is described as having the last whorl "obtuse angulatus," but in all the specimens of the Hong-Kong species that portion of the shell presents a well-marked keel, which can be readily seen and felt. On examination of actual specimens of *C. exaltatus*, Pfr., collected by Mr. Fortune in China, it is found that the periphery of the last whorl is almost, if not quite, rounded, certainly presenting nothing resembling the carination so obvious in the Hong-Kong species.

It was noticed by von Martens that the specimens of *Cyclophorus* which he collected in Hong-Kong were angulated and not rounded on the last whorl.

Möllendorff states that *C. exaltatus*, Pfr., is about as much keeled as *C. punctatus*, Grat., but the latter certainly presents nothing at all resembling carination.

The probability is that Mr. Fortune collected his specimens of *C. exaltatus*, Pfr., either in the Northern or Central Provinces of the Chinese Empire, hundreds of miles from Hong-Kong, but that by some error the last-named locality has been ascribed to them. Indeed, Möllendorff writes that "as only one species of *Cyclophorus* is found in Hong-Kong, he does not doubt, any more than von Martens did, that it is *C. exaltatus*, Pfr., always assuming that that species really was taken by Mr. Fortune in the island."

It is quite obvious that the *Cyclophorus* of Hong-Kong is not *C. exaltatus*, Pfr., and the question arises naturally, what is it? There are in the Natural History Museum two specimens of *C. subcarinatus*, Mölldf., from Lofoushan, a place 40 miles E.N.E. of Canton, which agree in every particular of shape and sculpture with the Hong-Kong species, and with a certain large proportion of them in coloration also.

Further, the description given by Möllendorff of *C. subcarinatus* exactly fits the Hong-Kong species as regards the existence of the keel on the periphery of the last whorl and the flattening of the base below it. There exists another species, *C. elegans*, Mölldf., from Shui Hing, a locality about 50 miles N.N.W. of Canton, which, from the figure given of it, bears a considerable resemblance to the Hong-Kong species, but as I have not been able to examine actual specimens I think it better to say no more of it for the present.

Möllendorff thought that on further investigation it might be possible to unite *C. punctatus*, Grat., *C. exaltatus*, Pfr., and *C. subcarinatus* as one; to me, judging by the material at present available, they appear quite distinct.

There is next to be faced the question of the distribution of *C. subcarinatus*, which is recorded from the island of Hainan as well as from Lofoushan, and now, in my opinion, shown to occur at Hong-Kong as well.

It is to be remembered that the region under consideration has scarcely been touched by conchologists, of whom a few have collected in scattered localities often at great distances from one another, so that it is quite likely when the molluscan fauna of South-Eastern China is better known, it will be found that *C. subcarinatus* is a common enough species, with a large area of distribution, in suitable localities. In conclusion, I can only say that I think *C. subcarinatus*, Mölldf., and the Hong-Kong species are not capable of separation.

Since writing the above I have ascertained that Mr. Fortune, a botanical collector employed by the Horticultural Society of London, spent nearly three years in China, from early in 1843 to the end of 1845.

The bulk of his time was occupied by collecting in the Chusans, Chekiang, and Fokien, although he did visit Canton and was several times at Hong-Kong. He does not mention collecting any mollusca, but expressly states that all his plants were sent home from Hong-Kong, which fortifies me in my belief that in this way an error of locality has crept in with regard to the specimens of *Cyclophorus* which he sent to this country.